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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/038,915

01/08/2002

Jianglei Ma

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06/13/2008

SMART & BIGGAR

P.O. BOX 2999, STATION D

900-55 METCALFE STREET

OTTAWA, ON K1P5Y6

CANADA

EXAMINER

MATTIS, JASON E

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

06/13/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/038,915	<b>Applicant(s)</b> MA ET AL.	
	<b>Examiner</b> JASON E. MATTIS	<b>Art Unit</b> 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2,4-14,16-23 and 57-61 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,5-14 and 16-21 is/are allowed.
- 6) ☒ Claim(s) 57-61 is/are rejected.
- 7) ☒ Claim(s) 4,22 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1 paper</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This Office Action is in response to the Amendment filed 2/20/08. Claims 2, 4-14, 16-23, and 57-61 are currently pending in the application.

#### ***Claim Objections***

2. Claims 4, 22, and 23 are objected to because of the following informalities:

Claim 4 has been amended to state "wherein the header OFDM symbol further contain". This appears to be a typo. It is recommended that the word "contain" be amended to "contains" in accordance with the now singular "header OFDM symbol".

Claim 22 contains the same typo as claim 4.

Claim 23 is objected to since it depends on claim 22.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 57-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallace et al. (U.S. Pat. 6473467) in view of Applicant's admitted prior art.

**With respect to claims 57-59**, Wallace et al. discloses transmitting an OFDM preamble having a prefix that is a cyclic repetition (**See column 14 lines 40-55 and Figure 1B of Wallace et al. for reference to appending a cyclic prefix/extension to an OFDM preamble**). Wallace et al. does not disclose following the prefix with two correlated header symbols. Wallace et al. does not disclose using two correlated header symbols.

**With respect to claims 60 and 61**, the Wallace et al. does not disclose following the prefix with two identical header symbols.

**With respect to claims 57-61**, the Applicant's admitted prior art discloses using multiple identical header symbols (**See page 4 line 18 to page 5 line 6 of the Applicant's specification for reference to using repeated OFDM symbols, which are inherently correlated since they contain repeated data**). Using multiple identical header symbols has the advantage of allowing synchronization to be more easily obtained.

It would have been obvious to one of ordinary skill in the art at the time of the invention, when presented with the Applicant's admitted prior art, to combine using multiple identical header symbols, as suggested by Applicant's admitted prior art, with the system and method of Wallace et al. and Ma et al., with the motivation being to allow synchronization to be more easily obtained.

***Allowable Subject Matter***

5. Claims 2, 5-14, and 16-21 are allowed.
6. Claims 4, 22, and 23 would be allowable if amended to overcome the claim objections, as noted above.

***Response to Arguments***

7. Applicant's arguments filed 2/20/08, with respect to claims 2, 4-14, and 16-23 have been fully considered and are persuasive. The previous rejections of these claims under 35 U.S.C. 103 have been withdrawn.

8. Applicant's arguments filed 2/20/08 with respect to claims 57-61 have been fully considered but they are not persuasive.

Applicant argues that a combination of Wallace et al. with the Applicant's admitted prior art would result in a preamble having a form including a prefix, followed by a header symbol, followed by another prefix, and followed by another header symbol. However, this argument is moot, since even if this were the case, there is no limitation in claims 57-61 that precludes a second prefix from being placed in between the plurality of claimed header symbols.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Baum et al. (U.S. Pat. 6959050 B2), Ring (U.S. Pat. 6430148 B1), and Brink et al. (U.S. Pat. 6038450) each disclose relevant OFDM transmission systems including synchronization information.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON E. MATTIS whose telephone number is (571)272-3154. The examiner can normally be reached on M-F 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on (571)272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JEM

/FIRMIN BACKER/  
Supervisory Patent Examiner, Art Unit 2616